

## REMARKS

### Introduction:

Claims 1 through 39 (Claims 40-57 were withdrawn in response to a Restriction Requirement) were pending in the patent application when an Office Action mailed May 31, 2005, rejected Claims 1-4, 6-10, 12-14, 16-18, 20-24, 26, 27, and 29-38. The Office Action noted that Claims 5, 11, 15, 19, 25, 28 and 39 were objected to but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner is thanked for the indication of allowable matter.

By way of this Amendment, and without introducing new matter, the Applicants have amended the Claims. Applicants respectfully request entry of the amendment and reconsideration and allowance of all claims pending in this patent application.

### Rejections under 35 U.S.C. § 102:

The Office Action rejected Claims 1-3, 9, 13, 14, 16, 17, 21, 23, 26, 27, 29, 30 and 32 as being anticipated by Chapman. The Office Action rejected Claims 1-3, 6, 8-10, 12-14, 16, 17, 20, 22, 22-24, 26, 27, 29, 30, 32-34, and 36-38 as being anticipated by Leduc. The Office Action rejected Claims 1-4, 7-9, 13, 16-18, 21-23, 26, 27, 29-35, 37, and 38 as being anticipated by Nakazawa. The Office Action stated Chapman, Leduc, and Nakazawa teach parallel elongated members and a plurality of pressure applying devices disposed therealong. Applicants respectfully traverse.

In one embodiment, an apparatus for applying a clamping force against a surface of a workpiece includes first and second substantially straight elongated members. *The first and second elongated members are approximately parallel and spaced apart to define an elongated slot therebetween.* The elongated members are further adapted to be positioned proximate the surface of the work piece, and to be secured to substantially prevent movement of the elongated members relative to the surface. The apparatus further includes *a plurality of pressure applying devices operatively attached to the first and second substantially straight elongated members and disposed therealong.* Each pressure applying device includes a contact member moveable

relative to an associated one of the first and second elongated members and adapted to engage the surface of the work piece, and a resilient member operatively coupled between the contact member and to the associated one of the first and second elongated members. The resilient member biases the contact member away from the elongated member to apply a clamping force to the surface of the work piece.

Chapman (U.S. 2,052,380)

Chapman teaches an automatic line welding machine in which a plurality of articles are fed in an end-to-end engagement past a welder. According to Chapman, the machine includes a conveyor 2, which supports the articles to be welded, and feed rolls 4 which feed the articles to the welder 3. (1:43-45). Guide rolls 5 align and direct the seams of the articles to the welder 3. (1:51-53).

Chapman does not disclose, teach, or fairly suggest the apparatus taught by applicants. Specifically, Chapman does not teach or suggest an apparatus for applying a clamping force against a surface of a workpiece that includes first and second substantially straight elongated members, *the first and second elongated members being approximately parallel and spaced apart to define an elongated slot therebetween.* Also, Chapman does not teach or suggest *a plurality of pressure applying devices operatively attached to the first and second substantially straight elongated members and disposed therealong.* According to Chapman, the guide rolls 5 merely align and direct the seams of the articles to the welder 3.

Leduc (U.S.5,535,938)

Leduc teaches an internal lineup clamp for clamping first and second pipes in proper orientation for welding. According to Leduc, a clamp assembly includes a frame and a first set of pipe clamps mounted on the frame for movement between a retracted position and a clamping position. (1:55-57). As shown in Figure 2 of Leduc, the frame 20 is an approximately circular frame. The clamps 22 move along radial directions from a centerline 24 of the frame 20. (2: 64-65). Each clamp 22 includes a cylindrical body 28 slidable within a cylindrical aperture 30, and a pair of wheels 32 mounted on an outermost end of the body 28. (3:2-3). In operation, the



clamp assembly is pneumatically-pressurized, causing the cylindrical bodies 28 to move radially outwardly, engaging the wheels 32 with the interior surface of a pipe. (3:4-33).

Leduc does not disclose, teach, or fairly suggest the apparatus taught by applicants. Specifically, Leduc does not teach or suggest an apparatus for applying a clamping force against a surface of a workpiece that includes first and second substantially straight elongated members, *the first and second elongated members being approximately parallel and spaced apart to define an elongated slot therebetween*. Also, Leduc does not teach or suggest *a plurality of pressure applying devices operatively attached to the first and second substantially straight elongated members and disposed therealong*. According to Leduc, the clamps 22 are mounted in a circular frame and move outwardly along radial directions.

Nakazawa et al. (U.S. 6,666,371 B2)

Nakazawa teaches a sealing system for sealing packages for electronic devices. According to Nakazawa, the sealing system includes a sealing machine 21 having a rotary table 27 with a plurality of loading stages 31 disposed thereon. (Figure 3). Each loading stage 31 includes a plurality of spring plates 41 coupled to a shaft 42. (Figure 4). In operation, as packages 81 are received by the loading stage 31, the plate springs 41 rotate upward around the shaft 42, and then rotate downward and press the packages 81 after the packages 81 are loaded onto the loading stage 31. (5:3-6). At a later time, caps 82 are sealed on the packages 81 in a sealing furnace 22. (6:49-53).

Nakazawa does not disclose, teach, or fairly suggest the apparatus taught by applicants. Specifically, Nakazawa does not teach or suggest an apparatus for applying a clamping force against a surface of a workpiece that includes first and second substantially straight elongated members, *the first and second elongated members being approximately parallel and spaced apart to define an elongated slot therebetween*. Also, Nakazawa does not teach or suggest *a plurality of pressure applying devices operatively attached to the first and second substantially straight elongated members and disposed therealong*. According to Nakazawa, the plate springs 41 rotate upwardly and downwardly around the shaft 42.



### Claims 1-15

Turning now to the specific language of the claims, claim 1 recites an apparatus for applying a clamping force against a surface of a work piece, the apparatus comprising *first and second substantially straight elongated members, the elongated members being approximately parallel and spaced apart to define an elongated slot therebetween*, the elongated members being further adapted to be positioned proximate the surface of the work piece and further adapted to be secured to substantially prevent movement of the elongated members relative to the surface; and *a plurality of pressure applying devices operatively attached to the first and second substantially straight elongated members and disposed therealong*, each pressure applying device including a contact member moveable relative to an associated one of the first and second elongated members and adapted to engage the surface of the work piece, and a resilient member operatively coupled between the contact member and to the associated one of the first and second elongated members, the resilient member biasing the contact member away from the elongated member to apply a clamping force to the surface of the work piece. (emphasis added).

As described above, the cited references (Chapman, Leduc, and Nakazawa) do not disclose, teach, or fairly suggest the apparatus recited in claim 1. More specifically, the cited references do not teach or fairly suggest an apparatus for applying a clamping force against a surface of a workpiece that includes first and second substantially straight elongated members, the *first and second elongated members being approximately parallel and spaced apart to define an elongated slot therebetween*. Also, the cited references do not teach or suggest *a plurality of pressure applying devices operatively attached to the first and second substantially straight elongated members and disposed therealong*. Accordingly, claim one is not anticipated by the cited references (Chapman, Leduc, and Nakazawa) and is allowable.

Claims 2-15 depend from claim 1 and are allowable for the same reasons as claim 1, and also due to additional limitations contained in those claims. For example, claim 3 recites the apparatus of claim 1 wherein at least one of the elongated members includes a first end portion and a second end portion adapted to be secured to an adjacent structure so that the elongated member extends across the surface of the workpiece to substantially prevent movement of the elongated member relative to the surface.

Similarly, claim 13 recites the apparatus of claim 1, further comprising third and fourth substantially straight elongated members coupled to the first and second elongated members, respectively, the third and fourth elongated members being approximately parallel and spaced apart to define a second elongated slot therebetween, the third and fourth elongated members being further adapted to be positioned proximate the surface of the work piece, and further adapted to be secured to substantially prevent movement of the elongated members relative to the surface; and a plurality of second pressure applying devices operatively attached to the third and fourth substantially straight elongated members and disposed therealong, each second pressure applying device including a second contact member moveable relative to an associated one of the third and fourth elongated members and adapted to engage the surface of the work piece, and a second resilient member operatively coupled between the second contact member and to the associated one of the third and fourth elongated members, the second resilient member biasing the second contact member away from the elongated member to apply a second clamping force to the surface of the work piece. Claim 14 recites the apparatus of claim 13, wherein the third and fourth elongated members are coupled to the first and second elongated members to form an angular assembly. These additional limitations are also not taught or fairly suggested by the cited references.

#### Claims 16-28

As amended, claim 16 recites an apparatus for applying a clamping force against a surface of a work piece, the apparatus comprising an elongated member adapted to be bridged across the surface of the work piece, the elongated member adapted to be secured to substantially prevent movement of the elongated member relative to the surface; *the elongated member defining a slot with a first side and a second side, the elongated member including a first portion and a second portion on first side and the second side of the slot, respectively; and a plurality of pressure applying devices distributed along the first and second portions, each pressure applying device being moveably coupled to a respective one of the first and second portions and including a contact member moveable relative to the respective one of the first and second portions and adapted to engage the surface of the work piece, and a resilient member operatively coupled between the contact member and to the respective one of the first and second portions, the*



resilient member biasing the contact member away from the respective one of the first and second portions to apply a clamping force to the surface of the work piece. (emphasis added).

As described above, the cited references (Chapman, Leduc, and Nakazawa) do not disclose, teach, or fairly suggest the apparatus recited in claim 16. More specifically, the cited references do not teach or fairly suggest an apparatus including an elongated member wherein *the elongated member defining a slot with a first side and a second side, the elongated member including a first portion and a second portion on first side and the second side of the slot, respectively, and a plurality of pressure applying devices distributed along the first and second portions*. Accordingly, claim 16 is not anticipated by the cited references (Chapman, Leduc, and Nakazawa) and is allowable.

Claims 17-28 depend from claim 16 and are allowable for the same reasons as claim 16, and also due to additional limitations contained in those claims. For example, claim 21 recites the apparatus of claim 16 wherein the first portion includes a first substantially straight segment, and the second portion includes a second substantially straight segment, the first substantially straight segment being positioned proximate and parallel to the second substantially straight segment, and wherein the plurality of pressure-applying devices are coupled to the first and second substantially straight segments.

Similarly, claim 21 recites the apparatus of claim 16 wherein the elongated member includes a first substantially straight segment, and the second portion includes a second substantially straight segment, the first substantially straight segment being positioned proximate and parallel to the second substantially straight segment, and wherein the plurality of pressure-applying devices are coupled to the first and second substantially straight segments. Claim 22 recites the apparatus of claim 16 wherein the elongated member includes a curved segment, and claim 23 recites the apparatus of claim 16 wherein the elongated member includes an angled segment. These additional limitations are also not taught or fairly suggested by cited references.



### Claims 29-32

Claim 29 recites an apparatus for clamping a work piece during a manufacturing process, the apparatus comprising *a first elongated member* adapted to be positioned proximate a surface of the work piece, the first elongated member including at least one portion adapted to be secured to substantially prevent movement of the first elongated member relative to the surface; *a second elongated member adapted to be positioned approximately parallel with and spaced apart from the first elongated member and forming an elongated slot therebetween*, the second elongated member being adapted to be secured to substantially prevent movement of the second elongated member relative to the surface; and *a first plurality of pressure applying devices operatively attached to the first elongated member a second plurality of pressure applying devices operatively attached to the second elongated member*, each pressure applying device including a contact member moveable relative to an associated one of the elongated members and adapted to engage the surface of the work piece, and a resilient member operatively coupled between the contact member and the associated one of the elongated members the resilient member biasing the contact member to apply a clamping force to the surface of the work piece. (emphasis added).

As described above, the cited references (Chapman, Leduc, and Nakazawa) do not disclose, teach, or fairly suggest the apparatus recited in claim 29. More specifically, the cited references do not teach or fairly suggest an apparatus for applying a clamping force against a surface of a workpiece that includes *a first elongated member [and] a second elongated member adapted to be positioned approximately parallel with and spaced apart from the first elongated member and forming an elongated slot therebetween*. Also, the cited references do not teach or suggest *a first plurality of pressure applying devices operatively attached to the first elongated member a second plurality of pressure applying devices operatively attached to the second elongated member*. Accordingly, claim 29 is not anticipated by the cited references (Chapman, Leduc, and Nakazawa) and is allowable.

Claims 30-32 depend from claim 29 and are allowable for the same reasons as claim 29, and also due to additional limitations contained in those claims.

#### Claims 33-39

Amended claim 33 recites an apparatus for clamping a skin to a frame during a manufacturing process, the apparatus comprising at least one cradle adapted to support the frame; at least one elongated member adapted to be positioned to bridge the frame, *the elongated member having a slot formed therein and adapted to provide access to the skin during the manufacturing process*, the at least one elongated member including first and second end portions adapted to be secured to substantially prevent movement of the elongated member relative to the frame; and *a plurality of pressure applying devices operatively attached to the at least one elongated member and disposed therealong*, each pressure applying device including a contact member moveable relative to the elongated member and adapted to engage the surface of the work piece, and a resilient member operatively coupled to the contact member and to the elongated member, the resilient member biasing the contact member away from the elongated member to apply a clamping force to the skin, holding the skin against the frame during the manufacturing process. (emphasis added).

As described above, the cited references (Chapman, Leduc, and Nakazawa) do not disclose, teach, or fairly suggest the apparatus recited in claim 33. More specifically, the cited references do not teach or fairly suggest an apparatus for applying a clamping force against a surface of a workpiece that includes *an elongated member having a slot formed therein and adapted to provide access to the skin during the manufacturing process*. Also, the cited references do not teach or suggest *a plurality of pressure applying devices operatively attached to the at least one elongated member and disposed therealong*. Accordingly, claim 33 is not anticipated by the cited references (Chapman, Leduc, and Nakazawa) and is allowable.

Claims 34-39 depend from claim 33 and are allowable for the same reasons as claim 33, and also due to additional limitations contained in those claims.



## CONCLUSION

Applicant respectfully submits all of the pending claims (claims 1-39) are patentable over the cited references and are in condition for allowance. Applicants respectfully request entry of the amendment, and reconsideration and allowance of all claims in this patent application.

If the Examiner has questions, the Examiner is invited to contact the Applicant's attorney listed below.

Respectfully submitted,

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## MAIL CERTIFICATE

I hereby certify that this communication is being deposited with the United States Postal Service via first class mail under 37 C.F.R. § 1.08 on the date indicated below addressed to: MAIL STOP AMENDMENTS, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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